Image 1 of 5

TRANSMITTAL OF APPEAL BRIEF (Large Entity)	Docket No. ITL.0571US

Re Application Of: **Dennis L. Matthies**

Serial No.	Filing Date	Examiner	Group Art Unit
09/904,269	July 12, 2001	Dalei Dong	2875

Invention: **Assembling Display Modules**

TO THE COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on **December 23, 2003.**

The fee for filing this Appeal Brief is: **$330.00**

☒ A check in the amount of the fee is enclosed.

☐ The Director has already been authorized to charge fees in this application to a Deposit Account.

☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. **20-1504**

Signature

Dated: **January 22, 2004**

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Signature of Person Mailing Correspondence

Cynthia L. Hayden

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cc:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:	Dennis L. Matthies	Art Unit:	2875
Serial No.:	09/904,269	Examiner:	Dalei Dong
Filed:	July 12, 2001		
For:	Assembling Display Modules	Atty Docket:	ITL.0571US P11416

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

Applicant respectfully appeals from the final rejection mailed December 4, 2003.

I. REAL PARTY IN INTEREST

The real party in interest is the assignee Intel Corporation.

II. RELATED APPEALS AND INTERFERENCES

None.

Date of Deposit: January 22, 2004
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Cynthia L. Hayden

Cynthia L. Hayden

III. STATUS OF THE CLAIMS

Claims 1-20 are rejected. Each rejection is appealed.

IV. STATUS OF AMENDMENTS

There were no amendments.

V. SUMMARY OF THE INVENTION

Referring to Figure 1, a chuck 18a may be utilized to secure a circuit board layer 12a in a flat configuration in one embodiment. In one embodiment, the circuit board layer 12a may be made of a ceramic material that may warp. Applying a vacuum through the chamber 26 within the chuck 18a, the circuit board layer 12a may be secured for processing in a flat or flattened configuration with the surface 28 facing upwardly for processing.

The vacuum applied through the chamber 26 may be distributed across the surface of the circuit board layer 12a by the diffuser 22 including a plurality of openings 24 in one example. Thereafter, the circuit board layer 12a may be subjected to any necessary processing.

Advantageously, since the circuit board layer 12a may initially have been warped, but is now held in a flattened configuration, the circuit board layer 12a is processed in a planar configuration. Thus, if ultimately the circuit board layer 12a is maintained in a flat planar configuration, it is not necessary to stress the processed features that have been applied to the surface 28 of the circuit board layer 12a. See specification at page 3, line 23 through page 4, line 17.

Referring to Figure 2, the chuck 18b may be utilized to similarly secure a display panel 12b in accordance with one embodiment of the present invention. In this example, the circuit

board layer 12a may be attached to the back side or nondisplay side of the panel 12b. Commonly, the display panel 12b may include a glass panel with light emitting elements secured or deposited to the panel 12b.

The display panel 12b may be processed through a series of steps in which the display panel 12b is held in a flat configuration by the chuck 18b. When the processing of both circuit board layer 12a and display panel 12b has been completed, the two chucks 18 are arranged in juxtaposition as shown in Figure 2 and the display panel 12b and the circuit board layer 12a have their processed sides combined as indicated at 28.

Next, the chuck 18b may be removed to expose the display panel 12b, now secured to the circuit board layer 12a as indicated in Figure 3. However, in this configuration, both the circuit board layer 12a and the display panel 12b may be held in a flat (or flattened) configuration in one embodiment. See specification at page 4, line 18 through page 6, line 2.

In one embodiment, the composite of the circuit board layer 12a and the display panel 12b may be secured to an optical integrating plate 30 as shown in Figure 4. The optical integrating plate 30 may include a structure that holds the composite of the circuit board layer 12a and the display panel 12b in a flat, secured position, as indicated in Figure 5.

The integrating plate 30 may include a transparent sheet that allows the display panel 12b to be viewed through the optical integrating plate 30. In some embodiments, the optical integrating plate 30 may provide a diffusing effect. In other cases, the integrating plate 30 may provide the effect of integrating a plurality of discrete display portions or tiles into an overall large area display.

At this point, the securement between the chuck 18a and the circuit board layer 12a may be released since the optical integrating plate 30 holds the assembly in a flat configuration.

Because the layer 12a and the panel 12b were processed in a flat configuration, the interconnections and elements that are attached during processing to the layer 12a and panel 12b are not unnecessarily stressed because these elements are always held in a flat configuration during processing and through use. See specification at page 6, line 3 through page 7, line 12.

Because of potential warping, for example, of the circuit board layer 12a, if the display panel 12b and layer 12a are processed in a conventional fashion as shown in Figure 8, the stresses between the circuit board layer 12a and panel 12b may cause the contacts 16, which may be solder balls, to break and release when the circuit board layer 12a for example attempts to return to its original shape. Alternatively, because of the warping of the circuit board layer 12a, good electrical contact may not be made between the layer 12a and panel 12b. Thus, to prevent stress-induced cracking and to make sure that good surface-to-surface contact for electrical connections are established, processing the two sheets in a flat configuration and then securing them to an integrating plate 30 may be advantageous in some embodiments. See specification at page 7, line 13 through page 8, line 18.

VI. ISSUES

A. Is Claim 1 Obvious Over Baker in View of Wu?

VII. GROUPING OF THE CLAIMS

All claims may be grouped with claim 1.

VIII. ARGUMENT

A. Is Claim 1 Obvious Over Baker in View of Wu?

Claim 1 calls for temporarily flattening a sheet. The sheet is then processing in the flattened configuration. Thereafter, the sheet is secured to a second sheet while continuing to hold the sheet in a flattened configuration.

The office action never suggests anywhere in Baker where it is taught to process the sheet in the temporary flattened configuration. Baker simply skips the intermediate steps of processing the sheet in a flattened configuration and immediately positions the flattened sheet on the second sheet and secures them together.

With the claimed invention, the flattened sheet is processed in the flattened configuration. Baker teaches away. Baker processes the sheet prior to flattening the sheet. As a result, when components are added to the sheet, and then the sheet is flattened, those components may be stressed and damaged. The claimed invention is a more advantageous way of assembling sheets.

In the final rejection, it is contended that since the sheet in Baker is held by a vacuum it is inherently flattened. But this need not necessarily be so as required by M.P.E.P. § 2112. It may be that the sheet is too stiff to be flattened by whatever vacuum is applied. Therefore, merely teaching the use of vacuum attachment does not inherently teach temporary flattening.

Likewise, Wu does not teach processing the sheet in a temporary flattened configuration.

Therefore, the rejection of claim 1 should be reversed.

IX. CONCLUSION

Applicant respectfully requests that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,

Date: January 22, 2004

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APPENDIX OF CLAIMS

The claims on appeal are:

1. A method comprising:

temporarily flattening a sheet;

processing said sheet; and

securing said sheet to a second sheet while continuing to hold said sheet in a flattened configuration.

2. The method of claim 1 wherein temporarily flattening the sheet includes placing the sheet in a vacuum chuck and applying a vacuum to flatten the sheet.

3. The method of claim 1 wherein processing said sheet includes applying row and column electrodes to said sheet.

4. The method of claim 3 wherein processing said sheet includes applying a light emitting material to said sheet.

5. The method of claim 4 wherein applying a light emitting material to said sheet includes applying an organic light emitting material between said row and column electrodes.

6. The method of claim 1 further including processing said second sheet in a flattened configuration.

7. The method of claim 6 including processing said second sheet in a chuck.

8. The method of claim 7 including processing both said first and second sheets in chucks and combining said sheets using said chucks.

9. The method of claim 1 including securing said first and second sheets to an integrator plate.

10. The method of claim 9 including surface mounting said first and second sheets.

11. The method of claim 8 including surface mounting said first and second sheets in said chucks.

12. A method comprising:

receiving a warped sheet;

temporarily flattening said sheet for processing;

processing said flattened, warped sheet; and

securing said flattened, warped sheet to a planar surface.

13. The method of claim 12 including securing said flattened sheet to a second sheet while continuing to hold said flattened sheet in a flattened configuration.

14. The method of claim 12 wherein temporarily flattening the sheet includes placing the sheet in a vacuum chuck and applying a vacuum to flatten the sheet.

15. The method of claim 12 including securing said flattened sheet to a rigid, planar integrating plate.

16. A method comprising:

temporarily flattening a ceramic sheet;

processing a glass panel to define row and column electrodes thereon; and

securing said sheet to said glass panel while continuing to hold said sheet in a flattened configuration.

17. The method of claim 16 including securing said sheet and said panel to an integrating plate.

18. The method of claim 16 wherein temporarily flattening the ceramic sheet by placing the sheet in a vacuum chuck and applying a vacuum to flatten the sheet.

19. The method of claim 16 wherein processing said panel further includes applying an organic light emitting material between said row and column electrodes.

20. The method of claim 16 further including processing both said sheet and said panel in chucks and combining said sheet and said panel using said chucks.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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4. The method of claim 3 wherein processing said sheet includes applying a light emitting material to said sheet.

5. The method of claim 4 wherein applying a light emitting material to said sheet includes applying an organic light emitting material between said row and column electrodes.

6. The method of claim 1 further including processing said second sheet in a flattened configuration.

7. The method of claim 6 including processing said second sheet in a chuck.

8. The method of claim 7 including processing both said first and second sheets in chucks and combining said sheets using said chucks.

9. The method of claim 1 including securing said first and second sheets to an integrator plate.

10. The method of claim 9 including surface mounting said first and second sheets.

11. The method of claim 8 including surface mounting said first and second sheets in said chucks.

12. A method comprising:

receiving a warped sheet;

temporarily flattening said sheet for processing;

processing said flattened, warped sheet; and

securing said flattened, warped sheet to a planar surface.

13. The method of claim 12 including securing said flattened sheet to a second sheet while continuing to hold said flattened sheet in a flattened configuration.

14. The method of claim 12 wherein temporarily flattening the sheet includes placing the sheet in a vacuum chuck and applying a vacuum to flatten the sheet.

15. The method of claim 12 including securing said flattened sheet to a rigid, planar integrating plate.

16. A method comprising:

temporarily flattening a ceramic sheet;

processing a glass panel to define row and column electrodes thereon; and

securing said sheet to said glass panel while continuing to hold said sheet in a flattened configuration.

17. The method of claim 16 including securing said sheet and said panel to an integrating plate.

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20. The method of claim 16 further including processing both said sheet and said panel in chucks and combining said sheet and said panel using said chucks.